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## 1 Routine/Function Prologues

### 1.1 Fortran: Module Interface *obsprecipforcing\_module.F90* (Source File: *obsprecipforcing\_module.F90*)

This module contains interfaces and subroutines that controls the incorporation of observed precipitation forcing

#### REVISION HISTORY:

14Nov02 Sujay Kumar Initial Specification

#### INTERFACE:

```
module obsprecipforcing_module
```

#### ARGUMENTS:

```
real, pointer :: obsprecip(:)
```

---

### 1.1.1 LIS\_obsprecipforcing\_init (Source File: *obsprecipforcing\_module.F90*)

#### INTERFACE:

```
interface LIS_obsprecipforcing_init
    module procedure precip_forcing_init
end interface
```

---

### 1.1.2 LIS\_get\_obsprecip\_forcing (Source File: *obsprecipforcing\_module.F90*)

#### INTERFACE:

```
interface LIS_get_obsprecip_forcing
    module procedure get_obsprecip_forcing
end interface
```

---

### 1.1.3 precip\_forcing\_init (Source File: *obsprecipforcing\_module.F90*)

Initializes the variables required for the spatial interpolation of observed precipitation data

#### INTERFACE:

```
subroutine precip_forcing_init()
```

#### USES:

```

use lisdrv_module, only :lis
use def_ipMod, only : allocate_ip, def_ip_input
use precipforcing_pluginMod, only : precipforcing_plugin
use spmdMod, only : masterproc

```

## CONTENTS:

```

if(lis%f%gpcpsrc.gt.0) then
    call precipforcing_plugin
    if(masterproc) then
        call defnatrespcp(lis%f%gpcpsrc)
        allocate(obsprecip(lis%d%ngrid))
    endif
endif

```

---

**1.1.4 get\_precip\_forcing (Source File: *obsprecipforcing\_module.F90*)**

Calls the routines to open, read, and interpolate observed precipitation forcing data

## INTERFACE:

```
subroutine get_obsprecip_forcing
```

## USES:

```

use lisdrv_module, only: lis, gindex
use grid_spmdMod

```

## CONTENTS:

```

if(lis%f%gpcpsrc.gt.0) then
    if(masterproc) then
        call glbpPrecip(lis%f%gpcpsrc)
    endif
    if(lis%f%findtime1 ==1 .or. &
       lis%f%findtime2==1) then
        if(npes > 1) then
            call scatter_precip_data()
        endif
        call timeinterppcp(lis%f%gpcpsrc)
    endif
endif

```

---

### **1.1.5 scatter\_precip\_data (Source File: obsprecipforcing\_module.F90)**

Distributes the precipitation forcing data onto the compute nodes

INTERFACE:

```
subroutine scatter_precip_data()
```

USES:

```
use grid_spmdMod
```